National Health Interview Survey Screening Data Transcript

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NANCY BREEN: Thank you, Jon. I really can't tell you how delighted I am to be here today. I presented this data before in other forums, sort of. As I'll tell you, there's a huge twist. But not to an audience like this, who is, I hope, really eager to do something about the problems that we find. I'm going to tell you the punchline though, right up front, and that is: this data set, the National Health Interview Survey, which is our pre-eminent, national survey of health and utilization of health services in the population and has been in the field continuously since 1956, is a gold-mine of information. It is not well set up to look at rural distressed areas. It's just not. So that's the punch line. And now I'm going to talk to you with what we tried to do with these data and what we were able to do. We have some plans to try again, because we don't stop at NCI, we just keep trying. And just as Ed Partridge is relying on us to fund the local services, at NCI to fund the local services, which, of course, we have to push hard to get the federal government to push things, too. And we can't fund local services at NCI; CDC does that. Unfortunately, there is a nasty division of labor here, in the federal government, which really does tie our hands, as well as yours. But what I'm hoping is that we can come up with some common goals, and from our little places in the world, we can push forward whatever we can do in order to meet those goals, because we can't pull out checkbooks. We really can't do that. And you can't necessarily change the way data is collected in this country, but you can push for that just as we can push for these programs in the areas where there is high cervical cancer mortality, which, I would say, have been subject to neglect. Because how else can you explain high rates of cancer mortality for a cancer which, as Harold Freeman and others have articulated already, is preventable. We're going to look at the National Health Interview Survey Data, and this is the national survey, which is kind of the corollary, though it's an older survey, as they said, to the BRFSS, the Behavioral Risk Factor Surveillance System survey that Irene just showed us. And, of course, as you probably know, the BRFSS datas are state-based and co-funded by CDC and the states.

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Now, why would we bother looking at the NHIS to try to get local data when we have the BRFSS Well, earlier estimates are available. As I said this has been in the field since 1956, and it's been collecting information on Pap smears since before 1987. But we've got data from 1990 to 1994. The other thing, and Irene mentioned this too: BRFSS is limited by being a telephone survey. Not everybody in this country has a telephone. And the NHIS is an in-person survey. Census Bureau interviewers go around to chosen households in the country. They knock on the door, and they go inside and they spend time interviewing you at your kitchen table.

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Now, why is it a problem that a -- why could a telephone survey be a problem Or why would the NHIS, an in-person survey be a bit better It's because Pap smear use, as we know, is lower among poor women, and poor women are less likely to have telephones. So your missing part of the population in which screening is less likely to occur. And this is likely to inflate the Pap smear rates. You would think that more people are screening than actually are, if you just rely on a telephone survey.

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Now, why not rely exclusively on this one, if it's an in-person survey and would get information on women who, we believe, are more likely to have cervical cancer or need screening. Well, it's because the national estimates are spotty. They don't interview in

every part of the country. In fact, let me just show

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you a map. The dark areas are areas where the survey that we're going to look at interviewed people. They didn't interview in those areas that are white in the country. And I can't tell, but I'm sure you can tell, whether your area is included or not. These are something called PSUs, Primary Sampling Units. And they're bigger than counties in most cases. But these are the only areas -- the Census Bureau divides the country up and gives these areas to the National Health Interview Survey for interviewing purposes. So, the information that we are going to have may or may not include your county.

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So we constructed an analysis plan to see what we could do, and we pooled the data from various years. The sample design changes periodically with the NHIS, so we wanted to pick years from the same sample design. So 1990, 1991, 2, 3, and 4 were included; we pooled those data. And then we initially decided we would look at the largest group of women, and by group I mean racial/ethnic group, so, race group. We're looking at white women, and we are looking at Hispanics and non-Hispanics. And as I said, this is the first round of analysis for this data. We anticipate looking at blacks in the next round as well. And if we can, we'll look at Hispanic and non-Hispanic blacks as well.

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Now, just to give you a sense of the PSUs that you saw colored on the map, what proportion are in the counties with a mortality that's in the top 20 percent. Cervical cancer mortality in the top 20 percent. Well, you can see, not very many. And when you get down to rural, there's 15. And then, if you want to look again to distinguish the economically distressed areas, then you have even less, so that if you wanted to look at the bottom 40 percent in terms of distressed counties and high mortality, you only have six of these PSUs. So, we're very limited here in what we can do with these data.

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Now, we did the same analyses that Irene just showed you. And with the NHIS data, because of these power constraints that I just talked about, we didn't find any statistically significant results for white women, except Hispanic turned out to be statistically significant. So that's a very, very powerful indicator. And that's an important indicator because this data is not showing us what you would expect it to show and what it does show when you just analyze the whole nation.

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There are some -- another reason we're going ahead with this analysis is that there's some additional variables available on the NHIS that aren't available on the BRFSS. For example, there's more detailed insurance categories. There may be a gradient within insurance. It's not just a question of having insurance or not having insurance. There are better and worse insurance. It's a little unclear what the pattern is at this point, because the insurance landscape is changing so quickly in this country. But nevertheless, we wanted to be able to measure that a little more completely than yes/no. And then there is also information on whether people have a usual source of care. Is there a regular place where you go to get health care And we didn't include -- we included in the notes people who go to an emergency room. But otherwise, if they went to a clinic or had an HMO or a private doctor, then they were yes ; they had a usual source of care. And I'll show you some data later, some national data. Well, I'll show you some local data now.

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Well, what we found was that Pap test rates for women living in distressed rural areas where cervical cancer mortality rates are in the top 20 percent were not statistically

significantly lower, than rates for women not living in these areas. And again, if I were a betting woman, I would bet money that, in fact, they are lower. But these data can't measure it because of the problem with the small number of PSUs in those areas.

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We did find that Pap use among Hispanic white women in the distressed areas with the high cervical cancer mortality, was statistically significantly lower in other areas when data on education were grouped by insurance. So what we've done is to group the data a little bit differently than Irene did. And in fact, we're hoping to go back with Irene and re-do these analyses in a parallel way. As we're able to come up different ways, she can do what we've done, and we can continue to look at this data in a parallel fashion. So this nested analysis

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seems promising, and we'll see what we can do with the BRFSS and possibly some other analyses strategies that I'll mention in a minute. So this is the data on Hispanic white women. And you can see that even though there's a lot of missing data those dots mean that there weren't enough people to count -- you still are getting a picture that in the distressed counties, even women looking in the top quadrants, the top part of the table women with more than a high school education are less likely to and who have private insurance or Medicare and private insurance are less likely, and that's statistically significant, are less likely to get a Pap smear if they're living in a distressed county than in the other counties. So already, this is such a strong relationship that we're seeing it in these data. So we think this may be a good way to analyze, and we're going to do some additional work with this and the BRFSS, as I said. But this just starts to get at the picture a little bit clearer. But when you have such data that's so unsuitable for this kind of analysis, you really have to be very clear and specific on your hypotheses that you're testing in terms in how you organize your data like this.

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So what are our findings The BRFSS data showed higher Pap smear rates than the NHIS, and that's probably for a few reasons. One is the NHIS data are earlier in time, and Pap rates have been increasing, although, frankly, they've been pretty stable since the '80s. The NHIS includes respondents with no telephones, which is another reason that's pulling the rates down. And then, also, the NHIS includes women with and without hysterectomy. We didn't remove women who had had a hysterectomy from the analysis.

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And nationally, I just wanted to show you some NHIS data in the way it's supposed to be used, which is as a national estimate. You can see that between '87 and '98 in the last decade, we just recently published a paper on this -- Pap smear use is high by age and

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race and ethnicity in this country. I think it's worth noting, though, that the bottom line is women 65 and older. And that's, on a national level, where the problem is. I know that there are pockets of problems, and that's why we're here today. But in general, we have to pay attention to older women. This issue has come up again and again. But it's confirmed here.

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And by race, there's not a whole lot of difference by race in the national data. Again, that may not conform to your locality; it may be different in your locality. But nationally, the races look pretty similar and these differences are not statistically significant.

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Now, in 1998, just looking at the data which is the most recently published the 2000 will be

out in the next couple years there were large differences by age, income, insurance, and, especially,

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by usual source of care. And what you can -- if you look across this table, then you see that with age, use of Pap smears declines, and as several people have pointed out, cervical cancer peaks in the 40s and 50s, and the women who are using this test the most are the youngest women. It's inversely related to age. And almost every row that you look at will show that relationship with age. And then, as you look at high school Education if you look at education, income, MSA, usual source of care, and insurance status, those are in the direction that you would anticipate, too. Where less education, less likely to screen; less income, less likely to screen. The MSAs didn't make much difference, but that's not rural-urban; that's a different measure. And then, usual source of care made a huge difference. It's the largest difference up there. And then, of course, insurance status and this is a simple measure of covered or not covered also make quite a big difference. So, those two variables on the bottom are actually things that could be changed if we had the political will in this country. They're not that difficult to change, really, except for the politics of it. Which people in other countries always say, "Well, why don't you just go lobby " But we who live here find it a little more difficult to try to do that, but

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